2. AMENDMENT/MODIFICAITON NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHA	ASE REQ. NO.	5. PROJECT N	NO. (If applicble)
6. ISSUED BY CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
				1	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, co	unty, State and ZIP Code)		(X) 9A. AMENDME	NT OF SOLICIAT	TON NO.
			(7.1)		
			9B. DATED (SEI	E ITEM 11)	
			104 MODIFICA	TION OF CONT	DA OT/ODDED NO
			TOA. MODIFICA	ATION OF CONTI	RACT/ORDER NO.
			10B. DATED (S	EE ITEM 11)	
				•	
CODE	CILITY CODE				
11. THIS ITEN	M ONLY APPLIES TO	AMENDMENTS OF	SOLICITATIONS		
The above numbered solicitation is amended as set fortl	o in Itam 14. The hour and	data appoified for receipt of (	Offere is a	stended.	is not extended.
Offers must acknowledge receipt of this amendment prior to					is not extended.
(a)By completing items 8 and 15, and returning	•	b) By acknowledging receipt	•	•	offer submitted;
or (c) By separate letter or telegram which includes a referen					
PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR your desire to change an offer already submitted, such change and offer already submitted and change are considered.	ge may be made by telegram				
amendment, and is received prior to the opening hour and da	ate specified.				
12. ACCOUNTING AND APPROPIRATION DATA (If required	)				
		DDIFICATION OF COL		RS.	
		DER NO. AS DESCRIE		DE IN THE CONT	TRACT OPNED
CHECK ONE A. THIS CHANGE ORDER IS ISSUED PURS NO. IN ITEM 10A.	OANT TO: (Specify authority	y) THE CHANGES SET FORT	H IN ITEN 14 AND MA	DE IN THE CONT	TRACT ORDER
B. THE ABOVE NUMBERED CONTRACT/0	ORDER IS MODIFIED TO REF	LECT THE ADMINISTRATIVE	CHANGES (such as cl	nanges in paying	office,
appropriation date, etc.) SET FORTH IN	ITEM 14, PURSUANT TO T	THE AUTHORITY OF FAR 43.	103(b).	0 . , 0	
C. THIS SUPPLEMENTAL AGREEMENT IS	ENTERED INTO PURSUANT	TO AUTHORITY OF:			
D OTHER (Court of the continue	d - 0-20 )				
D. OTHER (Specify type of modification an	a authority)				
E. IMPORTANT: Contractor is not,	is required to sign th	nis document and retu	ırn ——— co	opies to the	issuing office.
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organ	ized by UCF section heading	gs, including solicitation/contr	act subject matter whe	ere feasible.)	
Except as provided herein, all terms and conditions of the do	cument referenced in Item 9	A or 10A, as heretofore char	nged, remains unchang	ed and in full for	ce and effect.
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF	CONTRACTING OFFIC	ER (Type or prin	t)
15D CONTRACTOR/OFFEDOR	15C. DATE SIGNED	16D LINITED STATES OF A	MEDICA		16C. DATE SIGNED
15B. CONTRACTOR/OFFEROR	TOO. DATE SIGNED	16B. UNITED STATES OF A	AIVIENICA		TOC. DATE SIGNED
(Signature of person authorized to sign)	I		e of Contracting Officer		<u>-</u>

- 1. Delete Item number 7 from Amendment 0003.
- 2. Spec Section 02315-1.1 Delete the last sentence in this paragraph.
- 3. Spec Section 02315-2.1.1. Delete the last sentence of this paragraph and add the attached sketch to the end of the section.
- Delete Part 3 EXECUTION from Section 02315 in its entirety and replace with the following:

### "PART 3 EXECUTION

- 3.1 INSTALLATION
- 3.1.1 Placing and Driving
- 3.1.1.1 Placing

Pilings shall be carefully located as shown on the drawings or directed by the Contracting Officer. Pilings shall be placed as true to line as possible. Suitable temporary wales, templates, or guide structures shall be provided to insure that the piles are placed and driven to the correct alignment.

## 3.1.1.2 Driving

All piles shall be driven to the depths shown on the drawings and shall extend to the cut-off elevation indicated. A tolerance of one (1) inch above or below the indicated cut-off elevation will be permitted for pilings above ground. A tolerance of zero (0) above or three (3) inches below the indicated cut-off elevation will be permitted for pilings below water. All piles shall be driven without the aid of a water jet, unless otherwise authorized. Adequate precautions shall be taken to insure that piles are driven plumb. Piles shall not be driven nor pulled within one hundred (100) feet of concrete less than seven (7) days old nor within thirty (30) feet of concrete less than twenty-eight (28) days old.

- 3.1.2 Reserved
- 3.1.3 Reserved
- 3.1.4 Reserved
- 3.1.5 Reserved
- 3.1.6 Void Backfill

Where voids adjacent to the piling are induced by pile driving or pulling operations, the Contractor shall pump out all seepage and rain water and backfill with a tremie-placed slurry. The slurry shall consist of one (1) part cement, two (2) parts bentonite, and six (6) parts sand mixed with enough water to produce a slurry viscous enough to thoroughly fill the voids.

## 3.2 PLACING

### 3.2.1 Steel H-Piles

H-piles shall be driven as accurately as practicable in the correct locations, true to line both laterally and longitudinally and to the vertical lines, as indicated in the drawings. A lateral deviation from the correct location at the cut-off elevation of not more than one and one-half (1-1/2) inches will be permitted. A variation from plumb of not more than one-eighth (1/8) inch per foot of longitudinal axis will be permitted. A final variation in rotation of the pile about the centerline of the web of not more than 7.5 degrees will be permitted. The correct relative position of group piling shall be maintained by the use of templates or by other approved means. The vertical tolerance is plus or minus three (3) inches. Any pile driven out of correct location shall be pulled and redriven by the Contractor at no additional cost to the Government.

# 3.1.2 Steel Sheet Piling

Any excavation required within the area where sheet pilings are to be installed shall be completed prior to placing sheet pilings except within the sill structure. Pilings shall be carefully located as

shown on the drawings or directed by the Contracting Officer. Pilings shall be placed as true to line as possible. Suitable temporary wales, templates, or guide structures shall be provided to insure that the piles are placed and driven to the correct alignment. Piles shall be placed in a plumb position with each pile interlocked with adjoining piles for its entire length, so as to form a continuous diaphragm throughout the length of each run of piling wall. Interlocks shall be properly engaged. The Contractor's personnel shall not sit or place themselves on top of the sheet piling during the handling, installation, and removal of the piling.

## 3.3 DRIVING

#### 3.3.1 Steel H-Piles

H-piles shall be driven by an approved steam, air or diesel drop, single-acting, double acting, or differential acting pile-driving hammer. The Contractor shall select the proposed driving equipment as specified and submit descriptions of proposed equipment. Equipment selection shall be based on the wave equation. No drilling or jetting will be allowed before or during driving operations. The use of vibratory hammers shall not be allowed to drive the H-piles. The hammer shall be operated at all times at the steam or air pressure and at the speed recommended by the manufacturer. Boiler or compressor capacity shall be sufficient to operate the hammer continuously at full rated speed. To determine ram drop, the Contractor shall attach a scale (in inches) to the pile hammer and an indicator on the pile ram. Installation of both devices shall be in such a manner that displacement of the ram will be indicated on the scale. Both the scale and the indicator shall be easily legible to observers on the ground during operations. Piling shall be protected during driving by a cushion and cap of approved design. Pile drivers shall have firmly supported leads extending to the lowest point the hammer must reach to maintain the hammer in proper alignment at all times. Each pile shall be driven continuously and without voluntary interruption until the required depth of penetration has been attained. Deviation from this procedure will be permitted only in case the driving is stopped by causes which could not reasonably have been anticipated. Any pile that cannot be driven to the required depth because of an obstruction shall, as directed by the Contracting Officer, be pulled and another pile driven adjacent thereto, be cut off and used, or be abandoned as directed by the Contracting Officer. The Contractor shall make observations to detect any uplift of piling already driven and uplifted piling shall be backdriven to the original penetration, at no additional cost to the Government. The Contractor shall provide every facility for the Contracting Officer to inspect and record data relative to pile driving operations. This data shall include final tip elevation, top elevation and cutoff elevation.

## 3.3.2 Steel Sheet Piling

Pilings shall be driven so as not to subject the pilings to damage and to insure proper interlocking throughout their lengths. Pile hammers shall be maintained in proper alignment during driving operations by use of leads or guides attached to the hammer. A protecting cap shall be employed in driving, when required, to prevent damage to the tops of pilings. Pilings damaged during driving or driven out of interlock shall be removed and replaced. All piling shall be driven without the aid of a water jet. Adequate precautions shall be taken to insure that piles are driven plumb. Sheet piling shall not be driven more than one-quarter (1/4) inch per foot out-of-plumb in the plane of the wall nor more than one-eighth (1/8) inch per foot out of plumb perpendicular to the plane of the wall. If at any time the forward or leading edge of the piling wall is found to be out-of-plumb more than one-quarter (1/4) inch per foot in the plane of the wall or one-eighth (1/8) inch per foot perpendicular to the plane of the wall, the assembled piling shall be driven to the required depth and tapered pilings shall be provided and driven to interlock with the out-of-plumb leading edge or other approved corrective measures shall be taken to insure the plumbness of succeeding pilings. The maximum permissible taper for any tapered piling shall be one-quarter (1/4) inch per foot of length. Unless specifically indicated otherwise, each run of piling wall shall be driven to grade progressively from the start and pilings in each run shall be driven alternately in increments of depth to the required depth or elevation. On each day of sheet pile driving, the Contractor shall stab only the number of piles that can be driven to grade by the end of the day, and all piling stabbed shall be driven to grade by the end of each working day except that the last two (2) piles may remain tapered up to receive the next days piles. No pile shall be driven to a lower elevation

than those behind it in the same run except when the piles behind it cannot be driven deeper or in areas where there will be wall penetrations or obstructions are encountered. In this case, piling will be allowed to remain above final grade until the obstruction is removed or the penetration is completed. Alternately, if it is determined that an obstruction cannot be removed, the Contractor shall make such changes in design alignment of the pile structure as may be deemed necessary by the Contracting Officer to insure the adequacy and stability of the structure. Payment for the additional labor and materials necessitated by such changes will be made at the applicable contract prices. If the piling next to the one being driven tends to follow below final grade, it may be pinned to the next adjacent piling. The Contractor is advised that buried stumps or similar debris may be encountered periodically on the sheet pile alignment and appropriate consideration should be given to hard driving conditions should they occur.

## 3.3.2.1 Emergency Locking System on Pile Driving Head

All sheet pile driving equipment shall be equipped so as to prevent piles from falling when a single or multiple power failure occurs after the pile driving head is attached to the pile. The jaws of vibratory hammers shall be equipped with devices such that upon loss of hydraulic pressure, the jaws will not release the pile.

# 3.3.2.2 Inspection of Driven Piling

The Contractor shall inspect the interlocked joints of driven pilings extending above ground. Pilings found to be damaged or driven out of interlock shall be removed and replaced.

#### 3.4 DRIVING RECORD

A complete and accurate driving record of the H-piles shall be compiled and submitted as required in this specification The driving record for impact hammers shall include pile dimensions and location, pile identification number, date driven, original pile length, tip elevation, description of hammer used, rate of hammer operation, number of blows required for each foot of penetration throughout the entire length of each pile and for each inch of penetration in the last foot of penetration, total driving time in minutes and seconds for each pile, and other pertinent information as required or requested by the Contracting Officer. When driving long piles of highslenderness ratio, special precautions shall be taken to ensure against overstressing and leading away from a plumb or true position. The hammers shall be operated at all times at the speed and under the conditions recommended by the manufacturer subject to the approval of the Contracting Officer. Once pile driving has begun, all conditions (such as alignment, batter, cushion, etc.) shall be kept constant. Each pile shall be driven continuously and without interruption until the required depth of penetration has been attained. Deviation from this procedure will be permitted only when driving is stopped by causes that reasonably could not have been anticipated. Jetting shall not be used to assist driving piles. A pile that cannot be driven to the required depth because of an obstruction shall be pulled and redriven as directed by the Contracting Officer. When driving piles in clusters or under conditions of relatively close spacing, observations shall be made to determine heave. Heaved piles shall be backdriven to the original depth of penetration without additional cost to the Government. Piles damaged or impaired for use during driving shall be pulled and replaced with new piles and new piles driven as directed by the Contracting Officer without additional cost to the Government. The Contracting Officer may require that any pile be pulled for inspection. Piles pulled at the direction of the Contracting Officer and found to be in suitable condition shall be redriven as directed by the Contracting Officer and payment therefore will be made in accordance with paragraph 1.2.2.1.2 and 1.2.2.2.5. Piles pulled at the request of the Contracting Officer and found to be damaged shall be replaced by new piles at the Contractor's expense. After setting and mooring piles are driven, they shall be cut off square at the indicated cut off elevation.

#### 3.5 DAMAGED AND MISPLACED PILING

The Contractor may be required to pull selected piles after driving, for test and inspection, to determine the condition of the piles. Any pile so pulled and found to be damaged to the extent that its usefulness in the structure is impaired shall be removed from the work and the Contractor shall furnish and drive a new pile to replace the damaged pile. Any pile which is damaged

because of internal defects or by improper handling or driving, or which is otherwise damaged by fault of the Contractor so as to impair it for its intended use, or any pile driven out of proper location, shall be removed and replaced. All work of removal and cost of replacement shall be borne by the Contractor at no additional expense to the Government. Piles pulled and found to be in satisfactory condition shall be redriven and payment will be made in accordance with the applicable paragraph above.

## 3.6 CUTTING OF PILES

Steel sheet piles and H-piles extending above grade in excess of the specified tolerance, and which cannot be driven deeper, shall be cut off to the required grade. The Contractor shall also trim the tops of piles excessively battered during driving, when directed to do so, at no cost to the Government. Cut-offs shall become the property of the Contractor and shall be removed from the worksite. Piles driven below the elevations indicated for the top of piles and piles which, because of damaged heads, have been cut off to permit further driving and are then too short to reach the required top elevation, shall be extended to the required top elevation by welding an additional length, when directed, without cost to the Government. Should splicing of additional lengths be necessary, the splice shall consist of an approved butt joint with a weld that fully penetrates the web. Welded extensions shall be a minimum of six (6) inches in length. Piles adjoining spliced piles shall be full length unless otherwise approved. When piles are to be driven in sections and spliced together, they shall be delivered on site in full lengths and cut for splicing only after delivery. Welding of splices shall conform to the requirements of Section 05501, "METALWORK FABRICATION, MACHINE WORK, AND MISCELLANEOUS PROVISIONS". Ends of pilings to be spliced together shall be squared before splicing to eliminate dips or camber. Pilings shall be spliced together with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks. Spliced pilings shall be free sliding and able to obtain the maximum swing with contiguous pilings. The Contractor may cut holes in the piles for bolts, rods, drains or utilities at locations and of sizes shown on the drawings or as directed. All cutting shall be done in a neat and workmanlike manner. Bolt holes in steel piling shall be drilled or may be burned and reamed by approved methods, which will not damage the remaining metal. Holes, other than bolt holes, shall be reasonably smooth and of the proper size for rods and other items to be inserted."

5. Drawing 17 of 20. The 39'-4" dimension in quadrant 3-C should be 23'-4".

